

Name: _____

Test Date: _____

NATURAL ECOSYSTEM CHANGE STUDY GUIDE

1. Identify the TWO main parts of the **carbon cycle**: _____ & _____
2. Identify FOUR **reservoirs for carbon**:

3. Describe the TWO ways humans have affected the **carbon cycle**:

4. Identify the largest reservoir for nitrogen: _____

5. Describe steps and products in the **nitrogen cycle**.

Steps

Products

Fix

A

N

N

A

P

A

A

D

N

6. Identify the negative effect and cause of the following pollutants:

HNO₃ –

NO –

N₂O –

NO₃⁻ -

7. Explain the process of **eutrophication**:

8. Identify TWO characteristics of **oligatrophic waterways**:

9. Does the phosphorous cycle have a gas phase? _____ What type of cycle? _____
Describe the **phosphorous cycle**.

10. Identify TWO human activities that release large amounts of sulfur to affect the **sulfur cycle**:

11. Describe the **hydrologic cycle**.

12. **Water by the Numbers:**

% of the Earth covered by water: _____

Of all the water on the planet there is: _____% saltwater _____% freshwater

_____% polar ice caps / glaciers _____% water in lakes / rivers (surface water):

Identify the largest lake: _____ Identify the largest aquifer: _____

13. Describe **groundwater/aquifers** and the recharge rate as well as the water table:

14. Identify TWO **abiotic** and TWO **biotic** factors that affect aquatic ecosystems:

15. Describe TWO **ecosystem services** provided by the ocean:

16. Identify THREE possible explanations for **sea level rise**:

17. Discuss why an **upwelling, turnover, or thermocline** are ecologically important in aquatic ecosystems:

18. Define **indicator species**:

Describe why an indicator species important in understanding aquatic ecosystems:

19. Describe the environmental importance of **keystone species**.

Identify THREE examples of **keystone species**.

20. Describe the ecological significance of the **predator-prey cycle**:

21. Identify THREE **ecosystem services** and explain how the service benefits human society.

22. Define **ecological succession**:

Climax Community:

Primary Succession:

Secondary Succession:

23. Explain the connection between biodiversity and **stability**:

24. Describe inertia and resilience

25. Identify and describe the TWO **types of diversity systems**:

a.

b.

26. Describe the method of using a **biodiversity index**: